

## Electronic Supplementary Information (ESI)

### Effects of ionic radius of redox-inactive bio-related metal ions on the radical-scavenging activity of flavonoids evaluated using photometric titration

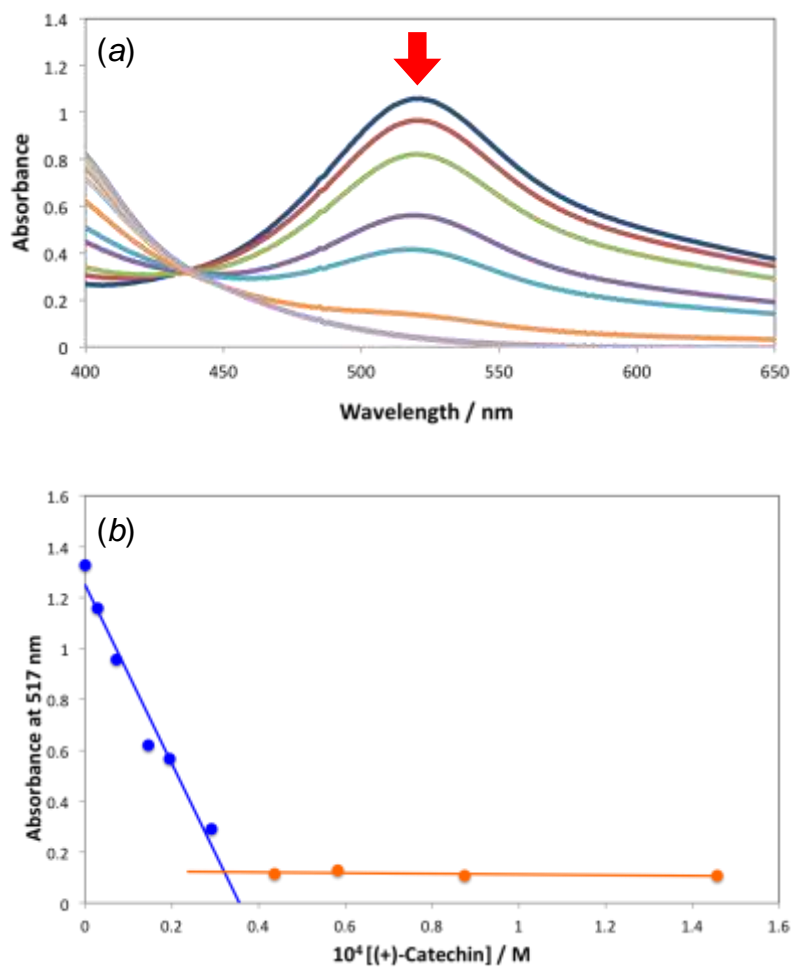
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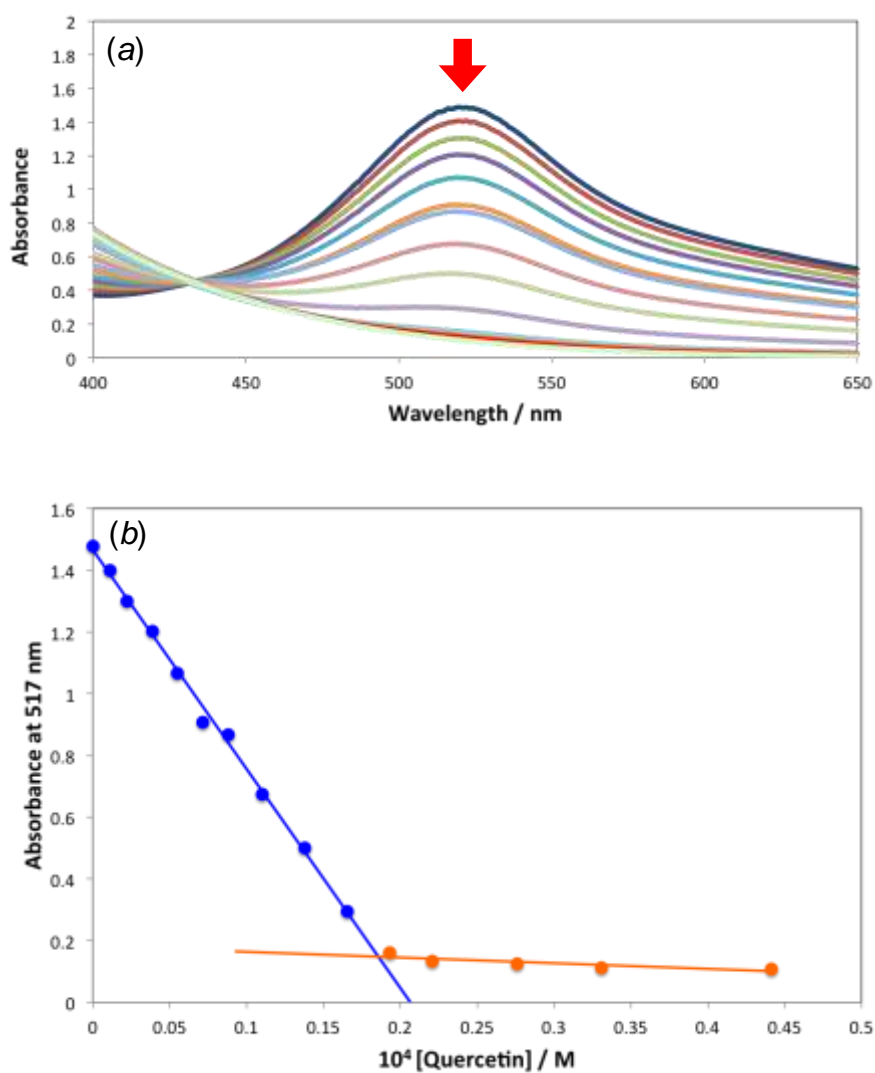
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**Fig. S1** (a) UV-vis spectra measured after the reactions of (+)-catechin ( $0$ ,  $2.92 \times 10^{-6}$ ,  $7.29 \times 10^{-6}$ ,  $1.46 \times 10^{-5}$ ,  $1.95 \times 10^{-5}$ ,  $2.91 \times 10^{-5}$ ,  $4.38 \times 10^{-5}$ ,  $5.83 \times 10^{-5}$ ,  $8.75 \times 10^{-5}$  and  $1.46 \times 10^{-4}$  M) with DPPH• ( $1.30 \times 10^{-4}$  M) for 30 min in ethanol/H<sub>2</sub>O (9:1 v/v) at 37 °C. (b) Plot of absorbance at 517 nm vs. [(+)-catechin].



**Fig. S2** (a) UV-vis spectra measured after the reactions of quercetin (0,  $1.10 \times 10^{-6}$ ,  $2.21 \times 10^{-6}$ ,  $3.86 \times 10^{-6}$ ,  $5.52 \times 10^{-6}$ ,  $7.17 \times 10^{-6}$ ,  $8.83 \times 10^{-6}$ ,  $1.10 \times 10^{-5}$ ,  $1.38 \times 10^{-5}$ ,  $1.66 \times 10^{-5}$ ,  $1.93 \times 10^{-5}$ ,  $2.21 \times 10^{-5}$ ,  $2.76 \times 10^{-5}$ ,  $3.31 \times 10^{-4}$  and  $4.41 \times 10^{-5}$  M) with DPPH $\cdot$  ( $1.49 \times 10^{-4}$  M) for 30 min in ethanol/H $_2$ O (9:1 v/v) at 37 °C. (b) Plot of absorbance at 517 nm vs. [quercetin].